

WHAT IS CLAIMED IS:

1. An image search apparatus for searching an image database that stores a plurality of image data for desired image data, comprising:

5 storage means for storing the plurality of image data in correspondence with image feature amounts of the image data;

input means for inputting an image using an input window;

10 image feature amount computing means for computing an image feature amount of the image input by said input means;

image similarity computing means for computing image similarity on the basis of the image feature amount computed by said image feature amount computing means, and the image feature amounts of the image data stored in said storage means;

15 image display means for displaying a list of image data as search results on the basis of the image similarity computed by said image similarity computing means; and

20 read-out means for reading out the image data stored in said storage means into the input window.

2. The apparatus according to claim 1, wherein said read-out means reads out one of the image data displayed by said image display means into the input window.

3. The apparatus according to claim 1, wherein said read-out means comprises selection means for selecting desired image data from the image data displayed by said image display means, and

5 said read-out means reads out the image data selected by said selection means into the input window.

4. The apparatus according to claim 1, wherein said image display means displays image data randomly selected from the image data stored in said storage means.

5. The apparatus according to claim 1, wherein said image display means displays designated image data of the image data stored in said storage means.

6. The apparatus according to claim 1, wherein said image display means comprises search means for searching for desired image data by designating attribute information appended to the image data, and

when a search is made by said search means, said image display means displays a list of image data found by the search of said search means.

7. The apparatus according to claim 6, wherein the attribute information is a keyword.

8. The apparatus according to claim 6, wherein the attribute information is at least one of dates of creation, management, and modification of image data.

9. The apparatus according to claim 1, further comprising display control means for controlling to display the input window within a display window displayed by said image display means.

5 10. An image search method for searching an image database that stores a plurality of image data for desired image data, comprising:

the storage step of storing the plurality of image data in a storage medium in correspondence with image  
10 feature amounts of the image data;

the image feature amount computing step of computing an image feature amount of an image input on an input window;

the image similarity computing step of computing  
15 image similarity on the basis of the image feature amount computed in the image feature amount computing step, and the image feature amounts of the image data stored in the storage medium in the storage step;

the image display step of displaying a list of  
20 image data as search results on the basis of the image similarity computed in the image similarity computing step; and

the read-out step of reading out the image data stored in the storage step into the input window.

25 11. The method according to claim 10, wherein the read-out step includes the step of reading out one of

the image data displayed by said image display step into the input window.

12. The method according to claim 10, wherein the read-out step comprises the selection step of selecting  
5 desired image data from the image data displayed in the image display step, and

the read-out step includes the step of reading out the image data selected in the selection step into the input window.

10 13. The method according to claim 10, wherein the image display step includes the step of displaying, as a default window, image data randomly selected from the image data stored in the storage medium in the storage step.

15 14. The method according to claim 10, wherein the image display step includes the step of displaying, as a default window, designated image data of the image data stored in the storage medium in the storage step.

15. The method according to claim 10, wherein the  
20 image display step comprises the search step of searching for desired image data by designating attribute information appended to the image data, and  
the image display step includes the step of displaying a list of image data found by a search in the  
25 search step, when the search is made in the search step.

16. The method according to claim 15, wherein the attribute information is a keyword.

17. The method according to claim 15, wherein the attribute information is at least one of dates of  
5 creation, management, and modification of image data.

18. The method according to claim 10, further comprising the display control step of controlling to display the input window within a display window displayed in the image display step.

10 19. A computer readable memory that stores a program code of an image search for searching an image database that stores a plurality of image data for desired image data, comprising:

a program code of the storage step of storing the  
15 plurality of image data in a storage medium in correspondence with image feature amounts of the image data;

a program code of the image feature amount  
computing step of computing an image feature amount of  
20 an image input on an input window;

a program code of the image similarity computing  
step of computing image similarity on the basis of the  
image feature amount computed in the image feature  
amount computing step, and the image feature amounts of  
25 the image data stored in the storage medium in the  
storage step;

1 a program code of the image display step of  
displaying a list of image data as search results on the  
basis of the image similarity computed in the image  
similarity computing step; and

2 a program code of the read-out step of reading out  
5 the image data stored in the storage step into the input  
window.

20. An image search apparatus for searching an image  
database that stores a plurality of image data for  
10 desired image data, comprising:

storage means for storing the plurality of image  
data in correspondence with image feature amounts of the  
image data;

input means for inputting an image using an input  
15 window;

image feature amount computing means for computing  
an image feature amount of the image input by said input  
means;

image similarity computing means for computing  
20 image similarity on the basis of the image feature  
amount computed by said image feature amount computing  
means, and the image feature amounts of the image data  
stored in said storage means;

image display means for displaying a list of image  
25 data as search results on the basis of the image

similarity computed by said image similarity computing means; and

designations means for designating a color used in the image to be drawn by said input means on the basis of the image data displayed by said image display means.

21. The apparatus according to claim 20, wherein said designation means designates the color used in the image to be drawn by said input means by indicating one pixel in the image data displayed by said image display means.

22. The apparatus according to claim 20, wherein said designation means designates the color used in the image to be drawn by said input means by indicating a predetermined region in the image data displayed by said image display means.

23. The apparatus according to claim 22, wherein the color designated by indicating the predetermined region is an average value of pixel values contained in the small region.

24. The apparatus according to claim 20, wherein said designation means designates the color used in the image to be drawn by said input means on the basis of image data to be displayed by said image display means.

25. The apparatus according to claim 20, wherein said designation means designates the color used in the image to be drawn by said input means on the basis of image

data which corresponds to image data displayed by said image display means, and is stored in said storage means.

26. The apparatus according to claim 20, wherein said designation means designates the color used in the image to be drawn by said input means on the basis of an image drawn on a drawing area used by said input means.

27. The apparatus according to claim 20, wherein said image feature amount computing means computes the image feature amount of the drawn image every time the image is modified by said input means.

28. The apparatus according to claim 20, further comprising display control means for controlling to display the input window within a display window displayed by said image display means.

29. An image search method for searching an image database that stores a plurality of image data for desired image data, comprising:

the storage step of storing the plurality of image data in a storage medium in correspondence with image feature amounts of the image data;

the image feature amount computing step of computing an image feature amount of an image input on an input window;

the image similarity computing step of computing image similarity on the basis of the image feature amount computed in the image feature amount computing



step, and the image feature amounts of the image data stored in the storage medium in the storage step;

the image display step of displaying a list of image data as search results on the basis of the image similarity computed in the image similarity computing step; and

the designation step of designating a color used in the image to be drawn on the input window on the basis of the image data displayed in the image display step.

30. The method according to claim 29, wherein the designation step includes the step of designating the color used in the image to be drawn on the input window by indicating one pixel in the image data displayed by said image display step.

31. The method according to claim 29, wherein the designation step includes the step of designating the color used in the image to be drawn on the input window by indicating a predetermined region in the image data displayed in the image display step.

32. The method according to claim 31, wherein the color designated by indicating the predetermined region is an average value of pixel values contained in the small region.

33. The method according to claim 29, wherein the designation step includes the step of designating the

color used in the image to be drawn on the input window on the basis of image data to be displayed in the image display step.

34. The method according to claim 29, wherein the designation step includes the step of designating the color used in the image to be drawn on the input window on the basis of image data which corresponds to image data displayed in the image display step, and is stored in the storage medium in the storage step.

35. The method according to claim 29, wherein the designation step includes the step of designating the color used in the image to be drawn at said input step on the basis of an image drawn on a user drawing area.

36. The method according to claim 29, wherein the image feature amount computing step includes the step of computing the image feature amount of the drawn image every time the image input on the input window is modified.

37. The method according to claim 29, further comprising the display control step of controlling to display the input window within a display window displayed in the image display step.

38. A computer readable memory that stores a program code of an image search for searching an image database that stores a plurality of image data for desired image data, comprising:

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a program code of the image display step of  
15 displaying a list of image data as search results on the  
basis of the image similarity computed in the image  
similarity computing step; and

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storage means for storing the plurality of image data in correspondence with image feature amounts of the image data;

selection means for selecting one of a plurality  
5 of different input methods;

input means for inputting an image using the input method selected by said selection means;

image feature amount computing means for computing an image feature amount of the image input by said input  
10 means;

image similarity computing means for computing image similarity on the basis of the image feature amount computed by said image feature amount computing means, and the image feature amounts of the image data  
15 stored in said storage means; and

image display means for displaying a list of image data as search results on the basis of the image similarity computed by said image similarity computing means.

20 40. The apparatus according to claim 39, wherein the input methods include at least a first input method of inputting an image on the basis of image data stored in said storage means, and a second input method of inputting an image on the basis of a color of image data  
25 stored in said storage means.

41. The apparatus according to claim 39, wherein the input methods include at least a third input method of inputting an image on the basis of image data stored in said storage means, and a fourth input method of inputting an image on the basis of a color managed by another application.

42. The apparatus according to claim 39, wherein said selection means comprises a pointing device having a plurality of buttons, and

10       the plurality of different input methods are  
assigned to the plurality of buttons, and one of the  
plurality of different input methods is selected by  
selecting one of the plurality of buttons.)

43. The apparatus according to claim 39, wherein said  
15 selection means comprises a plurality of buttons formed  
on an input window displayed by said image display means,  
and

the plurality of different input methods are assigned to the plurality of buttons, and one of the plurality of different input methods is selected by selecting one of the plurality of buttons.

44. An image search method for searching an image database that stores a plurality of image data for desired image data, comprising:

the storage step of storing the plurality of image data in a storage medium in correspondence with image feature amounts of the image data;

the selection step of selecting one of a plurality  
5 of different input methods;

the input step of inputting an image using the input method selected in the selection step;

the image feature amount computing step of computing an image feature amount of an image input in  
10 the input step;

the image similarity computing step of computing image similarity on the basis of the image feature amount computed in the image feature amount computing step, and the image feature amounts of the image data  
15 stored in the storage medium in the storage step; and

the image display step of displaying a list of image data as search results on the basis of the image similarity computed in the image similarity computing step.

20 45. The method according to claim 44, wherein the input methods include at least a first input method of inputting an image on the basis of image data stored in the storage medium in the storage step, and a second input method of inputting an image on the basis of a  
25 color of image data stored in the storage medium in the storage step.

46. The method according to claim 44, wherein the input methods include at least a third input method of inputting an image on the basis of image data stored in the storage medium in the storage step, and a fourth  
5 input method of inputting an image on the basis of a color managed by another application.

47. The method according to claim 44, wherein the plurality of different input methods are respectively assigned to a plurality of buttons provided to a  
10 pointing device, and the selection step includes the step of selecting one of the plurality of different input methods on the basis of a selection state of the plurality of buttons.

48. The method according to claim 44, wherein the  
15 plurality of different input methods are respectively assigned to a plurality of buttons formed on an input window displayed in the image display step, and the selection step includes the step of selecting one of the plurality of different input methods on the basis of a  
20 selection state of the plurality of buttons.

49. A computer readable memory that stores a program code of an image search for searching an image database that stores a plurality of image data for desired image data, comprising:

25 a program code of the storage step of storing the plurality of image data in a storage medium in

correspondence with image feature amounts of the image data;

a program code of the selection step of selecting one of a plurality of different input methods;

5 a program code of the input step of inputting an image using the input method selected in the selection step;

10 a program code of the image feature amount computing step of computing an image feature amount of an image input in the input step;

15 a program code of the image similarity computing step of computing image similarity on the basis of the image feature amount computed in the image feature amount computing step, and the image feature amounts of the image data stored in the storage medium in the storage step; and

20 a program code of the image display step of displaying a list of image data as search results on the basis of the image similarity computed in the image similarity computing step.

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